

12-1-1977

The 1977 Iowa Corn Yield Test Report, District 5

Kenneth E. Ziegler
Iowa State University

C. D. Hutchcroft
Iowa State University

Follow this and additional works at: <http://lib.dr.iastate.edu/cornyield>



Part of the [Agriculture Commons](#), and the [Agronomy and Crop Sciences Commons](#)

Recommended Citation

Ziegler, Kenneth E. and Hutchcroft, C. D., "The 1977 Iowa Corn Yield Test Report, District 5" (1977). *Iowa Corn Yield Tests*. 55.
<http://lib.dr.iastate.edu/cornyield/55>

This Report is brought to you for free and open access by the Extension and Experiment Station Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Iowa Corn Yield Tests by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

The 1977 Iowa Corn Yield Test Report, District 5

Abstract

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the fifty-eighth consecutive year for the test.

Disciplines

Agriculture | Agronomy and Crop Sciences



- Crops
- Soils
- Climate

THE 1977 IOWA CORN YIELD TEST REPORT

District 5

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the fifty-eighth consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Iowa State University approves the reproduction of any table in this report **only** if no portion is deleted and if the order of the data is not rearranged. Entries in tables 1 and 2 are designated by brand name and variety.

1977 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of nine entries per district. All entries had to be available in a quantity of at least 10 bushels.

One hundred twenty-one varieties were compared in this test. Two open-pedigree varieties were entered by Iowa State University from its corn breeding program. Nineteen of the varieties were determined to be widely grown and were entered by Iowa State University. Varieties were considered widely grown if they were planted on 0.75 per cent or more of the corn acreage in the district according to the 1976 survey of Iowa corn growers. Iowa State University entered a maximum of five widely grown varieties of any given brand. These entries were given priority over the remaining 100 entries made by seed producers.

Each entry was replicated four times in 4-row plots at a planting rate of 23,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

Prepared by Kenneth E. Ziegler, instructor in agronomy, and C. D. Hutchcroft, professor of agronomy and secretary of the Iowa Crop Improvement Association.

How Information Is Presented

The data presented are averages of two locations in 1975, three locations in 1976, and two locations in 1977. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all varieties tested in 1977 and for varieties tested in 1975 and 1976 that were in the 1977 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

Yield comparisons were made at one plant population that was similar to the moderate planting rate in the past years. It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.

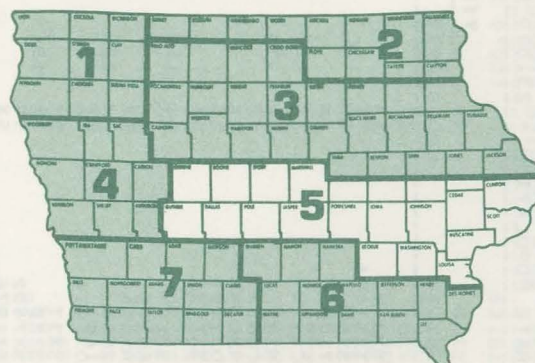


TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 5.
MODERATE POPULATION - 23,500 PLANTING RATE. LSD FOR 1977 YIELD IN BUSHELS IS 16.

BRAND	VARIETY	CROSS	YIELD BU./A			MOISTURE PCT.			ROOT LODGING PCT.			STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.		
			1975	1976	1977	1977	1976	1975	1977	1976	1975	1977	1976	1975	1977	1976	1975	1977	1976	1975
O'S GOLD	SX949	SX			107	16.4			0			3			1			75		
TROJAN	TXS105A	SX		131	105	16.5	19.5		1	0		8	10		1	1		73	91	
WINTERSET	SX62	SX		147	123	16.7	19.6		1	0		4	3		1	0		82	84	
DOCKENDORFF	7100	SX			129	16.7			2			5			1			83		
KALTENBERG	KX68	SX		117	131	16.7	20.1		1	0		2	1		2	0		83	77	
MIDDLEKOOP	M301	SX	134	141	126	16.7	20.6	22.2	2	0	2	2	3	0	2	0	0	81	81	90
CORNELIUS	C46SX	SX		143	127	16.7	20.0		1	0		3	5		2	0		85	87	
ASGROW	RX2345	SX			108	16.7	20.0		0	0		8	11		2	0		70	83	
DAIRYLAND	DX1007	SX			118	16.8			0			6			3			82		
O'S GOLD	SX1111	SX			132	16.8			0			2			1			76		
SEAGULL	SX10	SX			74	16.8			0			4			0			66		
AMES BEST	AB108	SX			112	16.9			0			6			2			76		
ASGROW	RX51A	SX			110	16.9			0			5			1			79		
SUPER CROST	2890	SX	136	151	115	16.9	20.2	21.4	3	0	0	2	6	2	1	0	0	73	83	93
WILSON	1400	SX		145	121	16.9	20.4		2	0		2	5		1	1		79	88	
AMES BEST	SX37	SX			118	16.9			1			8			1			76		
*PIONEER	3780	SX	131	141	108	16.9	19.1	19.4	2	0	1	5	4	3	2	0	1	77	91	90
MCALLISTER	SX7402	SX			125	17.0			3			3			0			83		
SUREWAY	SX1976	SX			121	17.0			5			4			1			83		
LYNKS	4220	SX		147	119	17.0	20.1		1	0		1	4		0	0		78	84	
*FUNKS	G4321A	SX	126	136	119	17.1	19.1	20.1	3	0	6	6	11	2	1	0	0	74	87	87
FSSERVICES	444	SX	127	157	127	17.1	20.3	21.8	0	0	7	5	4	1	1	0	0	80	88	84
GOLDEN HARVEST	H-2510	SX	117	129	95	17.1	19.8	20.1	2	0	2	6	3	1	1	0	0	70	87	90
NORTHRUP KING	PX65	SX			106	17.1			4			4			2			84		
YW HYBRID	YW49	SX			126	17.1			2			3			1			75		
CORNELIUS	SX58A	SX			112	17.3			14			4			2			77		
FUNKS	G4430	SX			120	17.3			1			8			4			80		
USS	0011	SX		127	105	17.4	20.0		3	1		7	8		1	0		77	86	
PRIDE	R803	SX	134	153	102	17.4	22.0	22.0	10	0	13	4	3	1	1	1	0	82	84	89
AGRISEED	5272	SX			109	17.4			2			6			0			79		
*PAG	SX397	SX			127	17.4			2			5			1			83		
AMERICANA	3500A	MS	121	164	125	17.5	22.0	22.7	6	0	17	5	4	2	1	0	0	82	91	86
*PIONEER	3709	MS		133	108	17.6	19.0		2	0		1	2		1	0		78	89	
PRIDE	6678	SX			123	17.6			1			1			0			71		
GUTWEIN	44	SX			113	17.7			2			4			2			76		
USS	0010	SX			109	17.7			0			5			1			74		
FERRY-MORSE	X770	MS	121	136	115	17.7	20.6	21.5	5	0	3	7	22	6	1	0	1	81	88	93
AMERICANA	2808	SX			110	17.7			2			4			1			79		
*DEKALB	XL54	SX		147	130	17.8	21.9		6	0		5	6		0	0		76	88	
*DEKALB	XL55	SX			123	17.8			10			7			0			76		
*PIONEER	3529	MS	116	148	124	17.9	20.7	21.4	1	0	0	2	1	0	1	0	0	82	87	89
LYNKS	4300	SX	124	154	113	17.9	21.5	22.0	7	1	3	5	21	6	3	0	0	76	89	82
PRAIRIE VALLEY	362	SX			102	18.0			5			4			1			83		
*NORTHRUP KING	PX606	3X			109	18.0			11			2			2			82		
IOWA STATE	M116	SX	129	174	134	18.0	21.9	24.6	4	0	17	7	6	5	1	0	0	82	88	87
SUPER CROST	4350	MS		158	117	18.0	21.3		7	0		4	6		0	0		79	87	
MIDDLEKOOP	M339	SX		165	127	18.0	22.2		3	0		14	4		2	0		83	85	
MCCURDY	MSX60	SX	122	161	127	18.2	22.0	23.6	10	0	6	4	4	1	2	0	0	84	86	88
PFISTER	75	SX			125	18.2			6			3			2			80		
GOLDEN HARVEST	H-2600	MS			109	18.3			7			2			0			80		
MCCURDY	MSX84A	SX			126	18.3			4			10			2			78		
PRAIRIE VALLEY	775	SX			135	18.3			1			6			1			76		
*FUNKS	G4449	SX	128	147	122	18.4	21.9	22.7	5	0	0	1	5	2	1	0	0	77	87	85
WILSON	1800	SX	115	159	119	18.4	23.4	25.6	7	0	4	3	4	1	1	1	0	82	87	72
CARGILL	920	SX	128	156	137	18.4	22.3	24.4	5	0	3	4	11	1	2	0	0	83	85	81
GUTWEIN	62	SX		174	129	18.4	23.4		7	0		3	5		0	0		81	92	
FEDERAL	FX39	SX		162	115	18.4	23.6		5	1		2	4		3	0		71	81	
FS SERVICES	242	SX		147	120	18.4	19.7		1	0		7	3		1	0		83	82	
SEAGULL	SX33	SX		154	124	18.5	21.9		7			3	3		1	0		83	82	
FERRY-MORSE	X880	SX		164	132	18.5	24.0		6	0		3	5		2	0		79	87	
YW HYBRID	YW79	SX			141	18.6			5			7			1			85		
CARGILL	949	SX	110	166	138	18.6	23.5	26.3	8	1	5	4	5	1	3	0	1	83	91	86
ACCO	UC7951	SX			126	18.6			8			2			1			86		
*GOLDEN HARVEST	H-2500	SX	124	160	119	18.6	23.4	24.9	4	0	0	4	1	0	0	0	0	70	90	85
AGRISEED	7582	SX			128	18.6			6			7			2			85		
AGRISEED	7642	SX			136	18.7			6			1			2			84		
*NORTHRUP KING	PX74	SX		165	127	18.7	23.2		11	0		2	3		2	1		83	87	
WILSON	1040	SX			133	18.7			3			9			1			83		
PAG	314	SX		162	123	18.7	23.5		10	0		4	5		1	0		81	90	
*DEKALB	XL72AA	SX			121	18.8			8			0			1			84		
FONTANELLE	611SC	SX			132	18.8			9			5			1			85		
PRIDE	7715	SX	131	173	127	18.8	23.2	24.5	4	0	6	4	3	1	3	1	0	79	90	82
PRAIRIE VALLEY	765	SX		165	132	18.8	24.3		7	0		3	6		1	0		81	88	
*PIONEER	3398	MS	127	151	128	18.8	23.2	24.6	4	0	3	1	11	1	0	0	0	81	88	92
COOP	2300	SX			121	18.8			5			1			2			73		
MCCURDY	MSX84	SX	126	168	137	18.8	23.7	24.9	6	0	3	1	2	0	3	0	0	83	81	93
FS SERVICES	680	SX	115	175	138	18.9	24.0	25.0	3	0	3	2	3	0	1	0	0	72	86	81
MARTINSON	SX470	SX			132	18.9			7			2			1			79		
AGRISEED	7782	SX			118	18.9			6			2			2			69		
*DEKALB	XL65B	MS			105	18.9			8			4			0			80		
GOLDEN HARVEST	H-2580	3X			122	18.9			5			3			2			76		
WINTERSET	SX66	SX			128	18.9			6			10			2			81		
*TROJAN	TXS115A	SX	116	169	117	18.9	23.6	25.5	5	0	7	2	2	1	1	1	0	83	90	91
*O'S GOLD	SX5500A	SX	122	167	123	19.0	22.8	25.2	12	0	8	3	5	0	3	0	0	79	83	87
LYNKS	SX430	SX	134	167	121	19.0	24.1	25.9	11	0	9	2	3	1	1	1	0	85	86	93
SEAGULL	SX40	SX	133	170	131	19.0	23.3	24.9	6	0	8	2	3	0	1	0	0	80	88	80
VINTON	SX600	SX			120	19.0			2			3			2			74		
O'S GOLD	SX5500AB	SX			114	19.0			12			3			0			73		
MIDDLEKOOP	M315	SX	134	167	131	19.1	24.1	25.7	13	0	8	4	2	1	2	0	0	83	85	90
AMES BEST	3200	SX	117	175	130	19														

Table A. Field Data

Gardner Farm Clarion loam				Lang Farm Mahaska silty clay loam			Elijah Farm Tama silty clay loam		
Fertilizer applied, lbs.	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
Plowdown	15	70	70	—	—	—	20	50	100
Preplant	180	—	—	186	92	120	—	—	—
Sidedress	—	—	—	75	—	—	180	—	—
Starter	—	—	—	—	—	—	—	—	—
TOTAL	195	70	70	261	92	120	200	50	100
1976 Crop	Soybeans			Soybeans			Soybeans		
Row width	38 inches			30 inches			30 inches		
Planting date	April 27			April 30			May 2		
Harvest date	Nov. 5			Nov. 1 and 2			Oct. 17		

1977 Field Data

The District 5 test was conducted on farms operated by Don Gardner near Ogden in Boone County, Eugene Lang Farm Corp. near Grinnell in Poweshiek County and Dick Elijah near Clarence in Cedar County. Data from the Poweshiek County location were not included because of drought damage. The field data are presented in Table A.

Subsoil moisture ranged from relatively unfavorable to favorable west to east across the district. Rainfall was below normal in May and June, near normal in July, and above normal in August and September. Temperatures were above normal in April, May, June, and July, below normal in August, and near normal in September. Yields were below normal in Boone and Poweshiek counties and above normal in Cedar County.

District 5

Designations Identifying Brands in the Yield Test

Designation	Name and Address
ACCO	ACCO Seed Div. of Anderson, Clayton & Co., Belmond, Ia. 50421
Agriseed	Agriseed Inc., Ames, Ia. 50010
Americana	Americana Seeds, Bowen, Ill. 62316
Ames Best	Ames Best Hybrids, Ames, Ia. 50010
Asgrow	Asgrow Seed Company, Des Moines, Ia. 50053
Cargill	Cargill, Inc., Minneapolis, Minn. 55440
Coop	Farmland Industries, Inc., Kansas City, Mo. 64116
Cornelius	Cornelius Seed Corn Co., Bellevue, Ia. 52031
Dairyland	Dairyland Seed Co., Inc., Kewaskum, Wis. 53040
*DeKalb	DeKalb Ag. Research, Inc., DeKalb, Ill. 60115
Dockendorff	Dockendorff Hybrids, Inc., Danville, Ia. 52623
Federal	Federal Hybrids, Marion, Ia. 52302
Ferry-Morse	Ferry-Morse Seed Co., Geneseo, Ill. 61254
Fontanelle	Fontanelle Hybrids, Nickerson, Neb. 68044
F.S.	F.S. Services, Inc., Bloomington, Ill. 61701
*Funks	Funk Seeds International, Inc., Bloomington, Ill. 61701
*Golden Harvest	Golden Seed Co., Cordova, Ill. 61242
Gutwein	Fred Gutwein & Sons, Inc., Francesville, Ind. 47946
Iowa State University	Department of Agronomy, Ia. State University, Ames, Ia. 50011
Iowa State	Iowa State Hybrid Corn Co., Elkhart, Ia. 50073
Kaltenberg	Kaltenberg Seed Farms, Waunakee, Wis. 53597
Lyons	Lyons Hybrids, Marshalltown, Ia. 50158
McAllister	McAllister Seed Farms, Mt. Pleasant, Ia. 52641
McCurdy	McCurdy Seed Co., Fremont, Ia. 52561
Middlekoop	Middlekoop Seed Corn Co., Packwood, Ia. 52580
*Northrup King	Northrup King Co., Minneapolis, Minn. 55440
*O's Gold	O's Gold Seed Co., Parkersburg, Ia. 50665
*PAG	PAG Seeds, Minneapolis, Minn. 55440
Pfister	Pfister Hybrid Corn Co., El Paso, Ill. 61738
*Pioneer	Pioneer Hi-Bred International, Inc., Des Moines, Ia. 50308
Prairie Valley	Prairie Valley, Inc., Phillips, Neb. 68865
Pride	Pride Company, Inc., Glen Haven, Wis. 53810
Seagull	Rothermel Seed Co., West Liberty, Ia. 52776
Super Crost	Edward J. Funk & Sons, Inc., Kentland, Ind. 47951
Sureway	Sureway Hybrids, Inc., Grinnell, Ia. 52361
*Trojan	Pfizer Genetics, Inc., Olivia, Minn. 56277
USS	USS Agri-Chemicals, Clayton, Mo. 63105
Vinton	Vinton Seed Co., Vinton, Ia. 52349
Wilson	Wilson Hybrids, Inc., Harlan, Ia. 51537
Winterset	Winterset Hybrid Co., Winterset, Ia. 50273
YW Hybrids	YW Hybrids, Grand Junction, Ia. 50107

*Widely grown entries made by Iowa State University.

TABLE 2. AVERAGES OF 1976-77 AND 1975-77 OF VARIETIES TESTED IN DISTRICT 5. LSD FOR YIELDS ARE .9 BUSHELS FOR 75-77 AND 10 BUSHELS FOR 76-77.

BRAND	VARIETY	CROSS	YIELD BU./A. 75-77	76-77	MOISTURE PCT. 75-77	76-77
TROJAN	TKS105A	SX	126	118	18.0	—
*PIONEER	3780	SX	126	124	18.0	18.5
*FUNKS	GA321A	SX	127	127	18.1	18.8
WINTERSET	SK62	SX	135	135	18.1	—
ASGROW	RK2345	SX	125	125	18.3	—
CORNELIUS	C465X	SX	135	135	18.3	—
*PIONEER	3709	MSX	120	120	18.3	—
GOLDEN HARVEST	H-2510	SX	113	112	18.4	19.0
KALTENBERG	K360	SX	124	124	18.4	—
LYNS	4220	SX	133	133	18.5	—
SUPER CROST	2890	SX	134	133	18.5	19.5
WILSON	1400	SX	133	133	18.6	—
MIDDLEKOOP	M301	SX	133	133	18.6	19.8
USS	0011	SX	137	116	18.7	—
FS SERVICES	444	SX	137	142	18.7	19.7
FS SERVICES	242	SX	133	133	19.0	—
FERRY-MORSE	3770	MSX	124	125	19.1	19.9
*PIONEER	3529	MSX	129	136	19.3	20.0
SUPER CROST	4350	MSX	137	137	19.6	—
LYNS	4300	SX	130	133	19.7	20.5
PRIDE	R803	SX	129	127	19.7	20.5
AMERICANA	3500A	MSX	136	144	19.8	20.7
DEKALB	XL54	SX	138	138	19.9	—
IOWA STATE	M116	SX	145	154	19.9	21.5
SEAGULL	SK33	SX	139	139	20.0	—
*FUNKS	G4449	SX	132	134	20.1	21.0
MCCURDY	MSX60	SX	136	144	20.1	21.3
MIDDLEKOOP	M339	SX	146	146	20.1	—
CARGILL	920	SX	140	146	20.3	21.7
GUTWEIN	62	SX	151	151	20.9	—
WILSON	1800	SX	131	139	20.9	22.5
*NORTHROP KING	PK74	SX	146	146	20.9	—
*O'S GOLD	SK5500A	SX	137	145	20.9	22.3
*PIONEER	3388	MSX	135	139	21.0	22.2
PRIDE	7715	SX	143	150	21.0	22.2
*GOLDEN HARVEST	H-2500	SX	134	139	21.0	22.3
CARGILL	949	SX	138	152	21.0	22.8
FEDERAL	FK39	SX	138	138	21.0	—
PAG	314	SX	142	142	21.1	—
MCALLISTER	SK7408	SX	132	132	21.1	23.2
SEAGULL	SKA0	SX	144	150	21.1	22.4
TROJAN	TKS113	SX	136	136	21.1	—
MCCURDY	MS184	SX	143	152	21.2	22.5
*TROJAN	TKS115A	SX	134	143	21.2	22.7
FERRY-MORSE	X880	SX	148	148	21.3	—
KALTENBERG	KX76	SX	145	145	21.3	—
FS SERVICES	680	SX	142	156	21.4	22.6
DEKALB	XL64	SX	140	135	21.4	22.0
IOWA STATE	110	SX	138	141	21.4	22.4
FUNKS	G4520	SX	141	141	21.4	—
MCALLISTER	SK7300	SX	139	144	21.5	23.2
LYNS	4330	SX	140	146	21.5	23.0
PRAIRIE VALLEY	765	SX	148	148	21.5	—
AMES BEST	SK19	SX	136	136	21.5	—
AMERICANA	3200	SX	140	152	21.6	22.8
MIDDLEKOOP	M315	SX	144	149	21.6	23.0
SUPER CROST	5440	SX	134	143	21.6	22.6
SEAGULL	SK55	SX	133	134	21.6	22.5
CORNELIUS	C775X	SX	139	147	21.6	22.8
MCALLISTER	SK7406	SX	150	150	21.7	—
WINTERSET	SK68	SX	148	148	21.7	—
ASGROW	RK2451	SX	139	145	21.9	23.2
ACCO	UC9451	SX	134	135	23.1	24.8
COOP	2318	SX	149	149	23.5	—
ACCO	UC9951	SX	140	140	23.5	—

OTHER REPORTS

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1977 Iowa Corn Yield Test Report:

Pm-660-1-77 District 1	Pm-660-5-77 District 5
Pm-660-2-77 District 2	Pm-660-6-77 District 6
Pm-660-3-77 District 3	Pm-660-7-77 District 7
Pm-660-4-77 District 4	

File: Agronomy 1

... AND JUSTICE FOR ALL

Programs and activities of Cooperative Extension Service are available to all potential clientele without regard to race, color, sex or national origin. Anyone who feels discriminated against should send a complaint within 180 days to the Secretary of Agriculture, Washington, D.C. 20250.

